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経済の数理解析

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Preface

This volume is a collection of papers presented at the symposium on mathematical economics sponsored by the Research Institute for Mathematical Sciences, Kyoto University, which was held during December 7～9, 2001.

On behalf of the programme committee, I would like to extend my cordial thanks to all the participants of the symposium for their sincere and constructive contributions to our project.

We can safely say that mathematical reasonings have been playing a much more indispensable roles in economic theory than in any other discipline of social sciences. There seems to be several reasons which have endowed economic theory with peculiar mathematical characters.

First of all, many economic phenomena permit expressions in terms of quantitative languages.

We have also to take account of the fact that an economy consists of a huge number of sectors which are entangled in a complex manner. Economic phenomena result from the interactions of these interdependent component sectors. Their mutual relation is so complicated that an ordinary language and a casual way of thinking have only very limited abilities to describe and analyze economic phenomena. It is quite easy for anyone to imagine serious confusions which would result if we had recourse exclusively to ordinary languages and casual reasonings. Although mathematical reasonings may somtimes seem too round-about for our purposes, it certainly provides economists with simple and efficient analytical weapons.

Furthermore economists have been suffering from the difficulty of controlled experiments in their researches. That is exactly why much importance has been attached to rigorous speculative experiments in economic theory. So called "axiomatic method" developed in Vienna during the inter-war period should be regarded as being promoted by the same view and recognition under the influence of D.Hilbert.

I would be pleased very much if our symposium could contribute to widening and deepening of the mathematical foundations in economic theory.

Toru Maruyama

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Mathematical Economics
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２００１年１２月７日～１２月９日

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